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# Does Cash Flow Really Matter for Corporate Investment Decisions?

## *Long ago and far away…*

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- Long-observed relationship between corporate investment and cash flow:

  - Fisher (Econom., 1933); Gurley and Shaw (AER, 1955); Meyer and Kuh (1957).

- *Prima-facie* evidence of financing constraints.

- Motivated capital rationing literature ('BODs'):

  - Charnes et al. (JB, 1959); Baumol and Quandt (EJ, 1965);
  Myers (JF, 1972), Weingartner (JF, 1977).

# *An economics-inspired takeover*

- Modigliani-Miller insights and perfect/efficient markets paradigm lead to a sea change in thinking:

  - A project's 'worth' is determined solely by its NPV. Financing considerations, including the firm's cash reserves, are irrelevant.

  - All 'good' projects receive funding.

- Capital rationing discussions begin to be relegated to little more than a footnote in textbooks.

- What about the empirical relationship between investment and cash flow? 'Explained' as emanating either from:

  - cash flow a proxy for profitability and investment opportunities; or

  - agency problems (Jensen & Meckling, JFE 1976) $\Rightarrow$ overinvestment!

## *The counter-revolution*

- Corporate finance theory during the 1980s began to emphasize the sensitivity of the M-M paradigm to market imperfections and the role of these in *constraining* firms' access to funds, e.g., Stiglitz and Weiss (AER, 1981), Greenwood et al. (AER, 1984), Myers and Majluf (JFE, 1984).

- Empirical support provided by Fazzari et al. (BPEA, 1988)

  - found that 'more constrained' firms had greater investment-cash flow sensitivity

  $\Rightarrow$ positive relationship between investment and cash flow is evidence of financing constraints.

## *And more…*

- Other studies found similar results across a wide range of investment ‘types’, e.g., R&D, inventories, labour.

- Objection: Q not adequately controlling for investment opportunities.

  - but ‘natural experiment’ studies found same results when cash flow shocks clearly independent of investment opportunities, e.g., Lamont (JF, 1997), Blanchard et al. (JFE, 1994), Froot and O’Connell (NBER, 1997).

# The great debate

- Kaplan and Zingales (QJE, 1997)

  - no theoretical reason for investment-cash flow sensitivity to monotonically increase in constraints;

  - FHP firms that are most constrained exhibit *lower* sensitivities than less constrained firms.

- Ensuing debate (FHP, QJE 2000; KZ, QJE 2000) centred on disagreements over

  - theoretical conditions for monotoncity;

  - appropriateness of KZ data sample (but see Cleary, JF 1999);

  - definition of ‘financially constrained’.

# An uneasy truce

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- Acceptance that the different findings of FHP and KZ at least partly reflect their different classification systems: frictions proxies versus financial strength indices.

- But not clear why.

- Subsequent work has focussed on refining and clarifying this state of affairs.

  - is the investment-cash flow relationship explained by financing constraints, or agency problems, or even something else entirely (Microsoft conundrum)?

# Consolidation?

- Studies of theoretical underpinnings have tended to muddy the waters

  - Alti (JF, 2003): can get FHP-type results in frictionless markets;

  - Boyle & Guthrie (JF, 2003): can get KZ-type results in presence of a binding financing constraint.

- Cleary et al. (JFQA, 2007): U-shaped relationship between investment and cash flow.

- Bushman et al. (2007): sensitivity insignificant under alternative measure of cash flow.

- Chen & Chen (2009): investment-cash flow sensitivity has disappeared!

# *The way forward…*

- Dynamic considerations - firm faces other constraints that may stop it using cash immediately.

- Reverse causality and second-order effects: the impact of investment on cash flow.

  - ordering of investment.